

APPENDIX B

RISK ASSESSMENTS



GENERAL RISK ASSESSMENT

Activity/Task: Site Investigation - General		RA Ref: GRA 023								
Locations: All CGL Premises / All Project Sites		Version: 2								
Persons Affected: Employees / Others (e.g. Sub-contractors / Visitors / Public)		Effective Date: 21/05/2021								
Assessment Team: C Doherty / Shane Johnston / D O'Mahony		Assessment Method: Observation / Experience								
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
1	Conflict with overhead services	Employees and others could be severely injured through contact with overhead cables	<p>Eliminate/Substitute: No drill rigs or mobile equipment to be sited within 3m (for 11 to 33kV lines) or 7m (for the 275 to 400kV lines) of the conductor of a power line, or 1.5x the height of the drill rig, whichever is the greater distance - unless line is de-energised / diverted by Designated Network Operator (DNO) and confirmation of this action is received in writing.</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: All test locations must be checked for overhead lines (OHL) and other utilities by competent staff. Where work is planned within 16m of OHL on steel towers, or 9m on steel / wooden / concrete poles PMs will consult with the DNO to determine exclusion zones / additional controls. When siting test locations, allowance needs to be made for the reach of excavators / rig masts so that the Exclusion Zones are never breached. Rigs / Excavators are never to be manoeuvred in vicinity of OH conductors with their masts raised. Suitable goalposts with bunting to be erected to provide safe passage under OHL and /or barrier when working on boundary of exclusion zones. Employees are to refer to Safety Alert 2018/002.</p> <p>PPE: Flame retardant workwear conforming with EN ISO 11612 to be worn.</p> <p>Other: N/A</p>	Catastrophic	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	Yes



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Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
2	Conflict with underground services	Employees and Others could be severely injured through contact with buried utilities	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: All detecting equipment must have valid calibration where appropriate i.e. CAT & Signal Generator.</p> <p>Administrative Controls: All test locations must be checked for utilities by competent staff and done so in accordance with SOP 01 Safe Digging Procedure. Accurate utilities drawings must be available on site. Identified utilities to be adequately marked at surface with line marking paint. Hand dug inspection pit to minimum of 1.2m bgl is mandatory prior to drilling / excavating. All site preparation / hand digging down to test depth to be conducted using BS 8020 insulated hand tools. A Permit To Work (Excavation) is to be issued when ground clearance procedures are conducted by client, sub-contractor or other 3rd party.</p> <p>PPE: Flame retardant workwear conforming with EN ISO 11612 to be worn. Eye protection conforming with EN 166 having minimum grade of Cat 1F to be worn.</p> <p>Other: N/A</p>	Catastrophic	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
3	Unexploded Ordnance	Employees and others could be seriously, or fatally, injured should drilling activities or persons disturb unexploded ordnance.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Where required, drilling equipment should be replaced with non-ferrous equivalent.</p> <p>Administrative Controls: A UXO specific PRA will be conducted to determine the UXO risk of site investigation areas. Where PRA identifies a UXO threat, a UXO DRA is to be completed. SI activities in areas of identified high UXO risk should be assisted by UXO specialists on site with appropriate detection equipment e.g. Magnetometers. UXO awareness briefings covering threat, emergency arrangements and basic identification are to be included in site induction process.</p> <p>PPE: N/A.</p> <p>Other: N/A</p>	Catastrophic	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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4	Injuries and Musculo-skeletal Disorders (MSD) from Manual Handling	Employees and sub-contractors could be injured or develop MSD through incorrect lifting techniques adopted during drilling activities.	<p>Eliminate/Substitute: Materials and equipment to be delivered to point of use wherever practicable.</p> <p>Engineering Controls: MH lifting aids to be provided where practicable.</p> <p>Administrative Controls: All Operatives to be current for Manual Handling training. All Operatives to follow the specific Safe System of Work / Manual Handling Risk Assessments (MHRA) for activities being undertaken.</p> <p>PPE: Safety Footwear complying with EN ISO 20345, minimum category of S1P to be worn at all times. Working gloves complying with EN 388, Minimum grade 4.1.1.1 to be worn.</p> <p>Other: N/A</p>	Moderate	Fairly Likely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
5	Collapse	Employees and Others could be fatally injured through collapse of existing permanent / temporary structures due to undermining.	<p>Eliminate/Substitute: N/A.</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Advice from Structural Engineer to be obtained when excavating in close proximity to existing structures. Minimise the size of trench required by using smallest bucket size practicable. All excavated materials to be stockpiled at least 1m away from excavation edge to prevent collapse. Exposed utilities to be supported.</p> <p>PPE: Safety Footwear complying with EN ISO 20345, minimum category of S1P to be worn at all times. Safety Helmet conforming with EN 397 with chin strap fitted to be worn at all times.</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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6	Collapse / Overturning of equipment	Employees and Others could be fatally injured through collapse / overturning of unstable Site Investigation equipment.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: All equipment used subject to periodic maintenance and mandatory Through Examination (TE) in accordance with current Regulations.</p> <p>Administrative Controls: Daily Before Use checks to be conducted. All faults to be reported ASAP and in accordance with IMS TP5-3. Lead Driller empowered to stop works for equipment safety critical issues. Only trained operators to use site investigation equipment and only types of equipment that they have been deemed competent in. Equipment subject to TE never to be used without proof of valid certification. Equipment to be set-up in accordance with manufacturer's instructions, training, appropriate industry guidance and relevant Method Statement. Appropriately sized timber grillages to be used under all hydraulic / screw jack feet on Drilling Rigs. Rigs being set-up on slopes should be adequately 'benched' or set-up on adequately designed temporary works platforms. No lone working on site at any time.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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7	Conflict with Vehicle / Plant	Employees and others could be injured through conflict with vehicles or plant equipment on site being driven / operated by other users.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Follow site rules. Where rules do not exist, vehicles / plant are to use headlamps, flashing beacons and hazard warning lights and limit speed to less than 10mph when manoeuvring. Only designated routes to be used. Traffic Management to be provided, as required, in accordance with Chapter 8 of the Traffic Signs Manual, or equivalent. Works areas to be adequately segregated by use of physical barriers / fencing. Unnecessary personnel to be removed from immediate working area. All persons to remain out of excavator strike zones when in operation. Where possible, vehicles / plant are to be parked on firm level ground and to avoid the need for reversing. Banks person to be used to guide vehicles / plant in areas where pedestrians are present and when reversing. Towed compressors must have wheels chocked.</p> <p>PPE: Full body hi-vis clothing complying with Class 3 of EN ISO 20471 to be worn.</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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8	Conflict with Vehicle / Plant	Employees and others could be seriously injured through conflict with vehicles or plant equipment during unloading activities.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: All vehicles / plant must have mirrors fitted. Where possible, follow site rules. Where possible, follow site rules. Where possible, follow site rules.</p> <p>Administrative Controls: Follow site rules. Where possible, follow site rules. Where possible, follow site rules.</p> <p>vehicles / plant / trailers being unloaded are to be parked on firm level ground away from other activities and in areas where need for reversing can be avoided. Site unloading areas to be adequately segregated from pedestrian areas by use of physical barriers / fencing. Banks person to be used to guide vehicles / plant in areas where pedestrians are present and when reversing. Unhitching of trailers to be done on flat level ground with braking system applied, and opposing wheels chocked. Good communication between Banks person and Driver / Operator. Vehicle handbrake applied and in 'Neutral' whilst assistant unhitches trailer. Driver / Operator only to manoeuvre when confirmed assistant is outside known entrapment zone between trailer and vehicle / plant.</p> <p>PPE: Full body hi-vis clothing complying with Class 3 of EN ISO 20471 to be worn.</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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9	Exposure to Respirable Dusts	Employees, sub-contractors, visitors and public may be exposed to respirable dusts including Respirable Crystalline Silica during site investigation activities.	<p>Eliminate/Substitute: N/A.</p> <p>Engineering Controls: Water suppression must be used when coring / cutting pavement materials. Local exhaust ventilation used when drilling in poorly ventilated areas.</p> <p>Administrative Controls: Operatives to complete Daily Before Use Checks. RPE must be worn when inhalable / respirable dusts are produced. All wearers of Respiratory Protective Equipment (RPE) must be trained on the make / model being worn. All wearers of tight fitting RPE must be Face Fit Tested on the make / model being worn and be clean shaven whilst in use. All unnecessary persons to be removed from immediate working area.</p> <p>PPE: A re-useable half mask complying with EN 140 and fitted with P3 (AFP20) rated filters, or Positive Air Pressure Respirator complying with EN 12941 rated to TH2P is to be worn during drilling without flush or handling of products producing Respirable Crystalline Silica (RCS), or other respirable / inhalable dusts.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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10	Exposure to Respirable Vapours / Fumes	Employees, sub-contractors, visitors and public may be exposed to respirable vapours / fumes during site investigation activities.	<p>Eliminate/Substitute: Use alternative methods such as electrical or hydraulic remote powered equipment.</p> <p>Engineering Controls: Exhaust fume filter kits / extraction kits fitted to plant when operating in poorly ventilated areas.</p> <p>Administrative Controls: Activities generally conducted in well ventilated areas. Engine exhaust pipes directed away from operators. All wearers of Respiratory Protective Equipment (RPE) must be trained on the make / model being worn. All wearers of tight fitting RPE must be Face Fit Tested on the make / model being worn and be clean shaven whilst in use. All unnecessary persons to be removed from immediate working area.</p> <p>PPE: A re-useable half mask complying with EN 140 and fitted with P3 (AFP20) rated filters, or Positive Air Pressure Respirator complying with EN 12941 rated to TH2P is to be worn during work in poorly ventilated areas.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
11	Falls from Height	Employees and others could be injured through falls from height	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Adequate fencing to be provided to secure all compounds / exploratory locations to minimise risk of trespass. Minimum of CH8 Barriers for day works and Heras style anti-climb for >1 shift at exploratory location. All fencing to be erected in accordance with manufacturer's instructions. Any unplanned WaH must be authorised by Head Office so that it is properly planned, risk assessed and supervised. No lone working on site at any time.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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12	Fire / Explosion	Employees and others may be exposed to risk of fire / explosion during refuelling activities.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Spark arrestors fitted to plant and equipment if used within high risk environments.</p> <p>Administrative Controls: All fuel carried in appropriately labelled UN approved containers. Equipment switched off and allowed to cool prior to refuelling. An in date 2Kg Dry Powder Fire Extinguisher located within arm's reach whilst refuelling. All plant to be switched off and other sources of ignition excluded whilst refuelling. Refuelling to be conducted with correct filling spout / bucket funnel. All spillages to be cleaned up immediately. Workwear contaminated with fuel / oil to be changed.</p> <p>PPE: Flame retardant workwear conforming with EN ISO 11612 to be worn.</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
13	Unauthorised entry to site	Employees or others could be injured through unauthorised access to site.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Appropriate safeguarding measures for site compounds and drilling locations to be adopted on a case by case basis - taking into consideration remoteness of location, duration of task. No excavations to be left open and unprotected at any time. Due consideration of unauthorised entry by 'Inquisitive Child', 'Dementia Sufferers' or others with impaired judgement must be given. Contingency plans to be made to secure investigation locations occupied overnight due to task overrun / breakdown etc. Safety Alert 2019/001 to be consulted.</p> <p>PPE: N/A.</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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14	Conflict / Aggression with 3rd Party	Employees and others could come into conflict, be subject to aggressive behaviour or be physically assaulted by 3rd parties during site investigation activities.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: All site operatives are to have access to adequately charged mobile phone at all times. No lone working on site. If confronted, employees should attempt to disengage / defuse to avoid conflict. Remain courteous and professional. Remember 'SAFER' = Step back, Assess Threat (Persons, Objects, Place), Find Help, Evaluate Options, Respond. All acts of aggression are to be reported using Incident Report Form, IMSF15. If physically assaulted, the local police are to be informed.</p> <p>PPE: N/A.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
15	Conflict with Livestock	Employees and Others could be severely injured through contact with livestock / cattle.	<p>Eliminate/Substitute: Livestock should be removed from areas where site investigation activities are being conducted.</p> <p>Engineering Controls: Livestock should be segregated from place of work by existing stock-proof hedging or fencing at least 1.3m high.</p> <p>Administrative Controls: Employees are not to handle cattle. All gates providing access / egress to working area to be kept closed. Adequate liaison with land owner to ensure livestock is segregated and planned movements are known in advance. A portable / temporary electric fence at least 1.3m high to be erected to prevent livestock from entering immediate working area. Electric fencing to be adorned with warning signs at max intervals of 100m. Safe access / egress to working area must be maintained.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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16	Disease	Employees and others may be exposed to risk of disease such as Tetanus, Typhus, Sepsis, Legionella, Leptospirosis (Weil's Disease), Lyme Disease, Hepatitis and HIV.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Adequate site welfare / hygiene facilities provided.</p> <p>Administrative Controls: Adequate level of inoculation against the common diseases associated with working with soil maintained. Locations to be checked for discarded needles / other drug-taking accessories prior to occupation. Operators not to handle discarded needles drug-taking accessories - refer it back to Project Manager to address with Client. Good regime of personal hygiene maintained. All cuts / abrasions to be cleaned and suitably covered to prevent infection. If skin punctured by sharp object e.g. needle or sharp in waste material, seek immediate medical attention. No shorts or short sleeve clothing to be worn where risk of tick bites are high e.g. long grass, wooded areas, areas where livestock may be grazing. Operators to check themselves for presence of ticks / bite marks throughout and at end of shift. If site / equipment suspected of being contaminated it should be disinfected and gloves changed frequently. All incidents to be reported in accordance with <i>IMS MP23</i>.</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, minimum grade 4.1.1.1. to be worn. Additional disposable nitrile gloves complying with EN 374 may be worn underneath i.e. 'Double Gloved'.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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17	Exposure to extremes of cold	Employees and Others could suffer injury or ill-health through exposure to extremes of cold from climatic conditions e.g. frostbite, cold contact injuries, non-freezing cold injuries.	<p>Eliminate/Substitute: Avoidance of activities during periods of excessive cold / high wind chill.</p> <p>Engineering Controls: Where possible, protection from elements to be provided.</p> <p>Administrative Controls: Weather conditions to be monitored. Consumption of alcohol during non-work time to be in moderation. Plentiful supply of hot drinks to be available on site at all times. Remain active to prevent body temperature from lowering. Immediate emergency medical attention to be sought if significant cold injury is suspected.</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, minimum grade 4.1.1.1. to be worn when handling metal items.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	Yes
18	Exposure to extremes of heat	Employees and Others could suffer injury or ill-health through exposure to extremes of heat from climatic conditions e.g. heat exhaustion, heat stroke.	<p>Eliminate/Substitute: Avoidance of manual activities during periods of excessive heat / humidity.</p> <p>Engineering Controls: Where possible, shade to be provided.</p> <p>Administrative Controls: Weather conditions to be monitored. Consumption of alcohol during non-work time to be in moderation. Plentiful supply of drinking water to be available on site at all times. Regular consumption of water encouraged to maintain hydration. Adequate ventilation when working indoors. High factor sun screens to be applied regularly. Frequency of breaks to be increased to aid recovery / hydration.</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, minimum grade 4.1.1.1. to be worn when handling metal items. Additional PPE such as helmet nape protectors (Neck Capes) to be worn as required.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	Yes



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19	Exposure to Noise	Employees and others could be exposed to potentially damaging levels of noise.	<p>Eliminate/Substitute: Switch off plant when not in use.</p> <p>Engineering Controls: Install noise attenuating measures where appropriate, to reduce noise as low as reasonably practicable (ALARP).</p> <p>Administrative Controls: Hearing protection is provided, and it is company policy that it should be worn at noise levels at or above 80 dB (135 dB Peak). Hearing protection is mandatory at noise levels at or above 83 dB (137 dB Peak). No person subject to noise above exposure limit of 87 dB (140 dB Peak) - with hearing protection worn.e.g. whilst conducting SPT tests, driving casing, using DTH.</p> <p>PPE: Helmet mounted hearing protection conforming with EN 352-3, Minimum SNR value of 24 to be worn.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
20	Exposure to Vibration	Employees and others may develop Hand Arm Vibration Syndrome (HAVs) from prolonged exposure to vibration from use of hand-held power tools.	<p>Eliminate/Substitute: Where practicable, test locations should be opened up by alternative methods such as overlapping coring.</p> <p>Engineering Controls: All equipment to be CE marked and adequately maintained. All equipment to be routinely maintained and worn components replaced. Low vibration rated tooling with anti-vibration measures to be procured where possible.</p> <p>Administrative Controls: Before Use Checks to be conducted and all faults reported. Where hand held power tools are used, 'Trigger Times' to be limited to absolute minimum by task rotation where appropriate. Individual Vibration Risk Assessments (VRA) for hand-held power tools to be consulted. Trigger times specified on HAVs warning labels affixed to tools never to be exceeded.</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, Minimum grade 4.1.1.1 to be worn.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
21	Failure of Equipment	Employees and others could receive injuries through failure of equipment.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: All equipment used subject to periodic maintenance and Through Examination (TE) in accordance with current Regulations.</p> <p>Administrative Controls: Daily Before Use checks to be conducted. All faults to be reported ASAP and in accordance with IMS TP5-3. Lead Driller empowered to stop works for equipment safety critical issues. Only trained operators to use site investigation equipment and only types of equipment that they have been deemed competent in. Equipment subject to TE never to be used without proof of valid certification. No lone working on site at any time.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
22	Fatigue	Employees and others could be injured as a result of fatigue.	<p>Eliminate/Substitute: Allocate sufficient resources to tasks.</p> <p>Engineering Controls: Vehicle tracking systems fitted to all site vehicles.</p> <p>Administrative Controls: Working Hours of all site operatives monitored to ensure compliance with EU Working Time Directive of max 48 Hours averaged over 17 week reference period - unless a signed 'Opt-out' is held. Working Time to include travel time from home to site for site operatives. 'Opt outs' for eligible employees signed and retained by HR staff. Young workers i.e. under 18 not permitted to work over 8 hours per day, or 40 hours in any week. Drivers of vehicles with combined mass of >3.5T not permitted to 'Opt-out'. All entitlement to rest periods to be taken throughout working period, and increased as necessary where manually intensive work is taking place.</p> <p>PPE: N/A.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:	Site Investigation - General	RA Ref:	GRA 023
Locations:	All CGL Premises / All Project Sites	Version:	2
Persons Affected:	Employees / Others (e.g. Sub-contractors / Visitors / Public)	Effective Date:	21/05/2021
Assessment Team:	C Doherty / Shane Johnston / D O'Mahony	Assessment Method:	Observation / Experience

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
23	Ground Contamination (BDA Cat Green / Yellow sites)	Employees and others may be inadvertently be exposed to various soil, or water, borne contamination hazards due to activities undertaken e.g. asbestos and leachates..	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: All projects should be categorised using the British Drilling Association's site traffic light system (green, yellow or red) at Desktop Study stage. Suitable welfare facilities to be provided on site. High standards of hygiene are to be maintained. If unplanned exposure to contamination, odours, vapours or waste materials are encountered, or any persons on site becomes unwell, drilling is to cease. If necessary seek medical attention. SOP 02 to be followed if ACMs encountered. Advice is to be sought from the Project Manager before proceeding.</p> <p>PPE: Disposable nitrile gloves complying with EN 374:2016 and a re-useable half mask complying with EN 140:1998 fitted with P3 (AFP20) rated filters are to be available during investigation activities.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task: Site Investigation - General	RA Ref: GRA 023
Locations: All CGL Premises / All Project Sites	Version: 2
Persons Affected: Employees / Others (e.g. Sub-contractors / Visitors / Public)	Effective Date: 21/05/2021
Assessment Team: C Doherty / Shane Johnston / D O'Mahony	Assessment Method: Observation / Experience

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
24	Slips / Trips / Falls	Employees and others may suffer injuries such as fractures or bruising if they slip / trip / fall on poorly reinstated work areas.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A.</p> <p>Administrative Controls: Lead Drillers / Site Engineers to take 'Before' and 'After' works photographs of each site location. All work areas are to be reinstated to the 'Before use' state using approved materials compliant with any relevant appropriate standard. Where Clients indicate that the standard of reinstatement may be lowered e.g. due to impending ground / demolition works, then PM will request explicit written instructions including the minimum standard acceptable, from the Client prior to commencing works. Areas where completion of re-instatement is not completed are to be adequately protected with barriers. All waste materials to be removed from site, or deposited in skips provided by CGL for site waste.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
25	Slips / Trips / Falls	Employees and others may suffer injuries such as fractures or bruising if they slip on spillages or trip over objects.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Exploratory locations should be improved by use of ground guard boards or capping material when ground conditions are soft.</p> <p>Administrative Controls: Good site husbandry to be maintained in all working areas. Tools and equipment to be kept in designated stores areas away from immediate working area and returned to here after use. Borehole arisings to be cleared / spread and not permitted to accumulate in working area. Periodic checks of immediate working area to be conducted to prevent trip hazards materialising from site investigation equipment, samples, materials etc.</p> <p>PPE: Safety footwear complying with EN ISO 20345, minimum category of S1P to be worn at all times.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task: Site Investigation - General		RA Ref: GRA 023								
Locations: All CGL Premises / All Project Sites		Version: 2								
Persons Affected: Employees / Others (e.g. Sub-contractors / Visitors / Public)		Effective Date: 21/05/2021								
Assessment Team: C Doherty / Shane Johnston / D O'Mahony		Assessment Method: Observation / Experience								
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
26	Electricity	Employees and others could be injured by contact with electricity through use of electrically operated power tools equipment.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Only 110v or Extra Low Voltage (Battery Operated) items authorised to be used outdoors. 230v items restricted to indoor use only and must be fitted to RCD protected circuit. Employees are only to use tools supplied by the employer and authorised to use. Conduct Daily Before Use checks to ensure tools provided remain fit for purpose e.g. condition of plug, cable, casing check, signs of scorching. All electrical items (Incl Hire) to have proof of Portable Appliance Testing (PAT) before use. Site office / welfare cabins to be supplied with valid Electrical Installation Condition Report.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Major	Very Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
27	Artesian Water	Employees and others could be injured and adjacent property at risk of localised flooding from release artesian water during drilling.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Correct drilling methods adopted.</p> <p>Administrative Controls: Desktop study completed to identify risk of artesian conditions. Drilling conducted and supervised by competent persons. Where artesian water is anticipated measures to deal with the anticipated rate of flow and the capping of borehole, without need to conduct unplanned work at height, are to be made available.</p> <p>PPE: N/A.</p> <p>Other: N/A</p>	Minor	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:	Site Investigation - General	RA Ref:	GRA 023
Locations:	All CGL Premises / All Project Sites	Version:	2
Persons Affected:	Employees / Others (e.g. Sub-contractors / Visitors / Public)	Effective Date:	21/05/2021
Assessment Team:	C Doherty / Shane Johnston / D O'Mahony	Assessment Method:	Observation / Experience

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
28	Impact Injury	Employees and Others could be injured through impact from debris ejected through site investigation activities.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Operatives to complete Daily Before Use Checks and confirm all guards are fixed in place. Only trained operators to use site investigation equipment and only types of equipment that they have been deemed competent in.</p> <p>PPE: Eye protection conforming with EN 166 having minimum grade of Cat 1F to be worn when drilling.</p> <p>Other: N/A</p>	Moderate	Very Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
29	Lone Working	Employees and others could be injured or become ill during site works.	<p>Eliminate/Substitute: Operators on site should not work alone, particularly high risk activities.</p> <p>Engineering Controls: Site vehicles fitted with GPS vehicle tracking.</p> <p>Administrative Controls: All site operatives to have mobile phone and means of charging when deploying to sites. Site operatives to ensure they maintain communication with Operations / Project Manager, checking in on a frequent basis throughout working shift.</p> <p>Site Operatives to conduct dynamic Point of Work Risk Assessment to identify any additional site based hazards prior to commencing work. Sites controlled by resident site supervisors should operate a Signing In / Out system to account for operative's movements.</p> <p>PPE: N/A.</p> <p>Other: Site Operatives undergo general wellness check as part of Occupational Health programme.</p>	Moderate	Very Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task: Site Investigation - General		RA Ref: GRA 023								
Locations: All CGL Premises / All Project Sites		Version: 2								
Persons Affected: Employees / Others (e.g. Sub-contractors / Visitors / Public)		Effective Date: 21/05/2021								
Assessment Team: C Doherty / Shane Johnston / D O'Mahony		Assessment Method: Observation / Experience								
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
30	Stress	Employees and others could be become ill through exposure to workplace stressors.	<p>Eliminate/Substitute: Plan work to manage demands. Allocate sufficient resources to tasks. Match tasks to capabilities. Effective communication.</p> <p>Engineering Controls: N/A.</p> <p>Administrative Controls: Senior, Project and Line Managers to consider the six key areas of work design throughout Project Management phase to assist in reducing effects of stress - Demand, Control, Support, Relationships, Role, Change. Consult GRA 008 - Workplace Stress Management for further detail.</p> <p>PPE: N/A.</p> <p>Other: Employees have access to 24 hour counselling through Westfield Health on 0800 092 0987 or 0145 525 5123 (Company Scheme No. 71718).</p>	Moderate	Very Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:	Site Investigation - General	RA Ref:	GRA 023
Locations:	All CGL Premises / All Project Sites	Version:	2
Persons Affected:	Employees / Others (e.g. Sub-contractors / Visitors / Public)	Effective Date:	21/05/2021
Assessment Team:	C Doherty / Shane Johnston / D O'Mahony	Assessment Method:	Observation / Experience

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
31	Minor Injuries	Employees and others could receive minor cuts, abrasions and contusions e.g. from use of hand tools	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Employees are only to use tools supplied by the employer and authorised to use. Conduct Daily Before Use checks to ensure tools provided remain fit for purpose e.g. no splits in shafts, no 'mushrooming' evident on cold chisels, splayed jaws on spanners / wrenches. Correct tool used for the task e.g. screwdrivers not to be used as chisels. Scaffold tubes not to be used for additional leverage on shafts of wrenches / lay keys / spanners etc. Only authorised safety knives with hooked blades to be issued / used e.g. Boxer 700 or Stanley Fat Max Retractable. All site operatives to be at least Emergency First Aid at Work (EFAW) trained, or approved equivalent. A 10 Person First Aid Kit complying with BS8599 and a minimum of 1 Litre of saline eyewash to be available at all locations.</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, Minimum grade 4.1.1.1 to be worn for standard operations. Level 5 cut resistant gloves to be worn when carrying out any cutting operations using knives.</p> <p>Other: N/A</p>	Insignificant	Fairly Likely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task: Site Investigation - General	RA Ref: GRA 023	
Locations: All CGL Premises / All Project Sites	Version: 2	
Persons Affected: Employees / Others (e.g. Sub-contractors / Visitors / Public)	Effective Date: 21/05/2021	
Assessment Team: C Doherty / Shane Johnston / D O'Mahony	Assessment Method: Observation / Experience	

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
32	Occupational Skin Disorder	Employees and others could develop allergic contact dermatitis, ulcerations, or suffer alkali burns through contact with cement based products during installation or reinstatement works.	<p>Eliminate/Substitute: Use pre-mixed products if available.</p> <p>Engineering Controls: Adequate welfare facilities to be provided.</p> <p>Administrative Controls: Good regime of personal hygiene maintained. Wash off splashes immediately. Operatives are not to kneel in wet concrete. Only competent persons to use products. Specific Hazardous Substance Risk Assessments (HSRA) and Safety Data Sheet (SDS) for product to be consulted prior to its use.</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, minimum grade 4.1.1.1, to be worn. Additional PPE as required by specific product HSRA / SDS.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Minor	Very Unlikely	Very Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
33	Occupational Skin Disorder	Employees and others could develop dermatitis or other debilitating skin conditions through contact with fuels, oils, lubricants or other similar products.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Adequate welfare facilities to be provided.</p> <p>Administrative Controls: Good regime of personal hygiene maintained. Only competent persons to use products. Specific Hazardous Substance Risk Assessments (HSRA) and Safety Data Sheet (SDS) for product to be consulted prior to its use. Barrier Cream supplied and its use to be encouraged.</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, minimum grade 4.1.1.1, to be worn. Additional PPE as required by specific product HSRA / SDS.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Minor	Very Unlikely	Very Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	

Drafted:

Approved:

Darren O'Mahony

Ciaran Doherty

Date Last Reviewed:

Risk Assessment reviews to be conducted in accordance with IMS MP16.

Applicable Method Statement(s): MS



GENERAL RISK ASSESSMENT

Activity/Task: Sonic Drilling		RA Ref: GRA 027								
Locations: All CGL Premises / All Project Sites / All Depts		Version: 1								
Persons Affected: Employees / Others (e.g. Sub-contractors / Visitors / Public)		Effective Date: 23/03/2021								
Assessment Team: N Haggan / C Doherty / M Jackson		Assessment Method: Observation / Experience								
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
1	Collapse / Overturning	Employees and Others could be fatally injured through collapse / overturning of unstable rotary rig.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: All equipment used subject to periodic maintenance and Through Examination (TE) in accordance with current Regulations.</p> <p>Administrative Controls: Daily Before Use checks to be conducted. All faults to be reported ASAP and in accordance with IMS TP5-3. Lead Driller empowered to stop works for equipment safety critical issues. Only trained operators to use site investigation equipment and only types of equipment that they have been deemed competent in. Equipment subject to TE never to be used without proof of valid certification. Equipment to be set-up in accordance with manufacturer's instructions, training, appropriate industry guidance and relevant Method Statement. Pedestrian operated rigs to be manoeuvred by remote particularly when traversing slopes. Appropriately sized timber grillages to be used under all hydraulic / screw jack feet on Drilling Rigs. All bracing to be securely fastened in place with pins / clips. Rigs being set-up on slopes should be adequately 'benched' or set-up on adequately designed temporary works platforms. Rotary rigs should not be 'tracked' with masts raised. No lone working on site at any time.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:		Sonic Drilling		RA Ref:	GRA 027					
Locations:		All CGL Premises / All Project Sites / All Depts		Version:	1					
Persons Affected:		Employees / Others (e.g. Sub-contractors / Visitors / Public)		Effective Date:	23/03/2021					
Assessment Team:		N Haggan / C Doherty / M Jackson		Assessment Method:	Observation / Experience					
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
2	Exposure to Exhaust Fumes	Employees, sub-contractors, visitors and public may be exposed to exhaust fumes during sonic drilling.	<p>Eliminate/Substitute: Position rig with exhaust downwind of lead driller and works area wherever possible.</p> <p>Engineering Controls: Local Exhaust ventilation to be used if drilling in areas with no natural ventilation.</p> <p>Administrative Controls: Operatives to complete Daily Before Use Checks. RPE must be worn when inhalable / respirable dusts are produced. All wearers of Respiratory Protective Equipment (RPE) must be trained on the make / model being worn. All wearers of tight fitting RPE must be Face Fit Tested on the make / model being worn and be clean shaven whilst in use. All unnecessary persons to be removed from immediate working area.</p> <p>PPE: A re-useable half mask complying with EN 140 and fitted with P3 (AFP20) rated filters, or Positive Air Pressure Respirator complying with EN 12941 rated to TH2P is to be worn during drilling without flush or handling of products producing Respirable Crystalline Silica (RCS), or other respirable / inhalable dusts.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
3	Falls from Height	Employees and others could be injured through falls from height	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: 5m stop for 2:1 pull to be secured to fixing point near to crown wheel before raising rig mast.</p> <p>Administrative Controls: No unauthorised climbing of drilling rig masts. Routine maintenance of items at drilling mast head to be conducted before erecting mast. Any unplanned WaH must be authorised by Head Office so that it is properly planned, risk assessed and supervised. No lone working on site at any time.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:		Sonic Drilling		RA Ref:	GRA 027					
Locations:		All CGL Premises / All Project Sites / All Depts		Version:	1					
Persons Affected:		Employees / Others (e.g. Sub-contractors / Visitors / Public)		Effective Date:	23/03/2021					
Assessment Team:		N Haggan / C Doherty / M Jackson		Assessment Method:	Observation / Experience					
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
4	Hydraulic Injection Injury	Employees and Others could receive hypodermic injection injuries from failure of hydraulic components under pressure, or from pressure washers.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Operatives are not to use their hands to inspect hydraulic hoses / couplings for leaks. Leak detection during Daily Before Use and Running Checks by observation only.</p> <p>Immediate emergency medical attention to be sought if hydraulic injection injury is suspected.</p> <p>PPE: Eye protection conforming with EN 166 having minimum grade of Cat 1F to be worn.</p> <p>Other: N/A</p>	Major	Unlikely	Medium	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
5	Exposure to Noise	Employees and others could be exposed to potentially damaging levels of noise.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Noise attenuation panels should be used when working in residential areas where Upper Exposure Action Value of 85 dB(A) is reached.</p> <p>Administrative Controls: Hearing protection is provided, and it is company policy that it should be worn at noise levels at or above 80 dB (135 dB Peak). Hearing protection is mandatory at noise levels at or above 83 dB (137 dB Peak). No person subject to noise above exposure limit of 87 dB (140 dB Peak). Typical activities where hearing protection must be worn include during SPT, driving casing, using compressed air (including releasing pressure from cylinders). Work sites where the Upper Exposure Action Value of 85 dB(A) is reached are to be designated and signed as Hearing Protection Zones (HPZ), where the wearing of appropriate hearing protection is mandatory.</p> <p>PPE: Helmet mounted hearing protection conforming with EN 352-3, Minimum SNR value of 24 to be worn.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:		RA Ref:								
Sonic Drilling		GRA 027								
Locations:		Version:								
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Persons Affected:		Effective Date:								
Employees / Others (e.g. Sub-contractors / Visitors / Public)		23/03/2021								
Assessment Team:		Assessment Method:								
N Haggan / C Doherty / M Jackson		Observation / Experience								
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
6	Exposure to Vibration	Employees and others may develop Hand Arm Vibration Syndrome (HAVs) from vibration transmitted through holding controls.	<p>Eliminate/Substitute: Operators are not to hold controls unless drilling in operation or load suspended.</p> <p>Engineering Controls: All equipment to be routinely maintained and worn components replaced.</p> <p>Administrative Controls: Before Use Checks to be conducted and all faults reported. Exposure unlikely to be above Exposure Action Value of 2.5m/s² A(8).</p> <p>PPE: Polyurethane (PU) coated working gloves complying with EN 388, Minimum grade 4.1.1.1 to be worn.</p> <p>Other: Employees subject to Occupational Health monitoring.</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
7	Impact Injury	Employees and Others could be injured through impact from falling objects.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Operatives to never walk under suspended load / tool. Lead Driller always to remain in control of winch when load suspended. Persons are not to remain in area immediately adjacent to safety cage when hole is being advanced, or sampling and testing being conducted. Down-the-hole drilling tools to be lifted into position using rig winch. Only authorised persons permitted in immediate drilling area.</p> <p>PPE: Safety Footwear complying with EN ISO 20345, minimum category of S1P to be worn at all times. Safety Helmet conforming with EN 397 with chin strap fitted to be worn at all times.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



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Activity/Task:		RA Ref:								
Sonic Drilling		GRA 027								
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Persons Affected:		Effective Date:								
Employees / Others (e.g. Sub-contractors / Visitors / Public)		23/03/2021								
Assessment Team:		Assessment Method:								
N Haggan / C Doherty / M Jackson		Observation / Experience								
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
8	Impact Injury	Employees and Others could be significantly or fatally injured through impact from whipping compressed airline.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Suitable whip checks fitted to every flexible to solid air line between the compressor and drilling head. Compressors must have proof of valid mandatory Thorough Examination in accordance with current regulations.</p> <p>Administrative Controls: Operatives to complete Daily Before Use Checks on equipment. Whip checks must be extended along flexible airlines to remove all slack. Those not directly involved in process to remain at safe distance.</p> <p>PPE: Safety Helmet conforming with EN 397 with chin strap fitted to be worn at all times.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
9	Impact Injury	Employees and Others could be injured through impact from rock core fragments generated when shortening oversized core samples using hand tools to fit into standard core boxes.	<p>Eliminate/Substitute: Alternative method of shortening should be used if available to provide controlled outcome e.g. use of cut-off saw with water suppression.</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Operatives to complete Daily Before Use Checks on equipment being used to break rock core. Those not directly involved in process to remain at safe distance.</p> <p>PPE: Face Shield conforming with EN 166 having minimum grade of Cat 1F to be worn.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:		RA Ref:								
Sonic Drilling		GRA 027								
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Persons Affected:		Effective Date:								
Employees / Others (e.g. Sub-contractors / Visitors / Public)		23/03/2021								
Assessment Team:		Assessment Method:								
N Haggan / C Doherty / M Jackson		Observation / Experience								
Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
10	Injuries and Musculo-skeletal Disorders (MSD) from Manual Handling	Employees and sub-contractors could be injured or develop MSD through incorrect lifting techniques adopted during drilling activities.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: MH lifting aids to be provided where practicable.</p> <p>Administrative Controls: All Operatives to be current for Manual Handling training. All Operatives to follow the specific Safe System of Work / Manual Handling Risk Assessments (MHRA) for activities being undertaken. MHRA 001, 002, 003 and 004 specifically relate to rotary coring activities.</p> <p>PPE: Safety Footwear complying with EN ISO 20345, minimum category of S1P to be worn at all times. Working gloves complying with EN 388, Minimum grade 4.1.1.1 to be worn.</p> <p>Other: N/A</p>	Moderate	Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	
11	Entrapment / Entanglement	Employees and others could be injured through entrapment / entanglement with moving parts.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Drill string suitably guarded with interlocking guard which fails to safe. Positive action required to re-start rotation.</p> <p>Administrative Controls: Operatives to complete Daily Before Use Checks and confirm all guards are fixed in place. Only trained operators to use site investigation equipment and only types of equipment that they have been deemed competent in. No jewellery, loose clothing, or clothing with drawcords to be worn during operation of equipment. Keys never to be left in unaccompanied plant. Operators to be aware of known 'pinch points'. Adjustments to wire on winch drums only to be conducted at minimum revolutions. No unauthorised maintenance / modification or over-riding of safety features. No lone working on site at any time.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Moderate	Very Unlikely	Low	Adequate supervision to ensure compliance with Safe System of Work.	Supervisory Staff	Ongoing	



GENERAL RISK ASSESSMENT

Activity/Task:	Sonic Drilling		RA Ref:	GRA 027
Locations:	All CGL Premises / All Project Sites / All Depts		Version:	1
Persons Affected:	Employees / Others (e.g. Sub-contractors / Visitors / Public)		Effective Date:	23/03/2021
Assessment Team:	N Haggan / C Doherty / M Jackson			
Assessment Method: Observation / Experience				

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
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Drafted:

		Approved: Ciaran Doherty
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Date Last Reviewed:	Risk Assessment reviews to be conducted in accordance with IMS MP16.	Applicable Method Statement(s): MS 027
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GENERAL RISK ASSESSMENT

Activity/Task:	Working in the Vicinity of Water	RA Ref:	GRA 028
Locations:	Near Water	Version:	1
Persons Affected:	Employees / Others (e.g. Sub-contractors)	Effective Date:	12/05/2021
Assessment Team:	J Doxey / C Doherty	Assessment Method:	Observation / Experience

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
1	Lone Working	Employees and others could suffer injury or ill health while working alone	<p>Eliminate/Substitute: Under no Circumstances will Lone Working be permitted when working near water.</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Mobile phone to be on operative at all times.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Major	Unlikely	Medium	N/A	HSEQ Mngr	12/05/21	
2	Work at Height	Employees risk fatal or serious injuries if they fall from height.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Operatives to have WAH Training</p> <p>PPE: Harness and Lanyard to be worn</p> <p>Other: N/A</p>	Major	Unlikely	Medium	N/A	HSEQ Mngr	12/05/21	
3	Drowning	Employees risk fatal injuries	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Two way radios to be used.</p> <p>Administrative Controls: Toolbox talk to be giving reminding Operatives of dangers and being safe when working near water. Access height of water, flow and tides if appropriate. Postpone if necessary.</p> <p>PPE: Buoyancy Aids to be worn</p> <p>Other: Never work alone or out of view of work mates</p>	Major	Fairly Likely	Medium		HSEQ Mngr	12/05/21	



GENERAL RISK ASSESSMENT

Activity/Task: Working in the Vicinity of Water	RA Ref: GRA 028
Locations: Near Water	Version: 1
Persons Affected: Employees / Others (e.g. Sub-contractors)	Effective Date: 12/05/2021
Assessment Team: J Doherty / C Doherty	Assessment Method: Observation / Experience

Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
4	Infection from hazardous / contaminated substances i.e. Wells disease, cryptosporidium	Operatives	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: Adequate welfare / hygiene facilities provided.</p> <p>Administrative Controls: Adequate level of inoculation against the common diseases associated with working with soil maintained. Cleaning staff not to handle discarded needles or other drug-taking accessories. Good regime of personal hygiene to be maintained - particularly attention paid to hands to prevent hand to mouth transmission. All cuts / abrasions to be cleaned and suitably covered to prevent infection. If skin punctured by sharp object e.g. needle or other sharp item in waste material, seek immediate medical attention. Gloves changed frequently. All incidents to be reported.</p> <p>PPE: Reusable nitrile gloves complying with EN388 (minimum grade 2.0.1.0) and EN374 to be worn. Additional disposable nitrile gloves complying with EN 374 may be worn underneath i.e. 'Double Gloved'.</p> <p>Other: N/A.</p>	Moderate	Very Unlikely	Low		Site Supervisor	12/05/21	
5	Manual Handling	Employees risk injuries or development of MSDs from handling or moving heavy/bulky objects, e.g. cleaning equipment or heavy waste bags.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Cleaning equipment provided at each floor level. Trolleys are available for moving heavy waste bags. Employees do not overfill waste bags or bins. Cleaning staff trained on proper use of equipment. All employees complete Manual Handling training.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Minor	Very Unlikely	Very Low		Site Supervisor	12/05/21	




GENERAL RISK ASSESSMENT


Activity/Task:	Working in the Vicinity of Water	RA Ref:	GRA 028
Locations:	Near Water	Version:	1
Persons Affected:	Employees / Others (e.g. Sub-contractors)	Effective Date:	12/05/2021
Assessment Team:	J Doxey / C Doherty	Assessment Method:	Observation / Experience


Ser	Hazard / Task or Situation	Persons exposed and how	Control Measures	Harm	Likelihood	Risk	Further Actions	Action by whom	By when	Done
6	Slips / Trips / Falls	Employees or others may be injured if they slip on spillages or trip on machine cables or objects left on the floor.	<p>Eliminate/Substitute: N/A</p> <p>Engineering Controls: N/A</p> <p>Administrative Controls: Good standard of housekeeping maintained. Wet floor signs used by cleaner b/ employees to mark wet floors / spills. Spills cleaned up immediately. Cleaners use electrical sockets nearest to where they are working to reduce the risk of trailing leads.</p> <p>PPE: N/A</p> <p>Other: N/A</p>	Minor	Very Unlikely	Very Low		Site Supervisor	12/05/21	

Drafted: _____ **Approved:** _____

Date Last Reviewed:	_____	Risk Assessment reviews to be conducted in accordance with Health and Safety Policy
	 _____) : MS	

Causeway Geotech Ltd		RISK ASSESSMENT		Prepared by: NH			Checked by: CD			
		RA99: General project specific risks - Barge	Routine Risks	Date:			November 2019			CGT_RA99 Rev 02
REF	ACTIVITY	POTENTIAL HAZARD	PERSONS AT RISK	Risk Rating Before Existing Controls			Existing Control Measures	Risk Rating After Existing Controls		
				P	C	R		P	C	R
1	Loading/unloading vehicles for JUB mobilisation	Personal injuries, fall from height	E, C	2	3	6	<p>When slinging loads from the transports, which require the slinger to be atop the load, a fall arrestor and harness are to be worn.</p> <p>The fall arrestor block will be secured to the hook block of the mobile crane positioned at an appropriate height above the operation so allow the slinger to move freely between the lifting points.</p> <p>Once all the lifting accessories have been connected into the designated lifting points, the operative will descend from the load and disconnect from the fall arrestor block.</p> <p>Standard PPE; hard hat with chin strap, overalls and gloves to be worn in addition to the safety harness.</p>	1	3	3
2	First man into vessel during mobilisation	Personal injuries, fall from height	C	2	3	6	<p>After the Crew Boat has been craned into the water and positioned adjacent to the access point using appropriate mooring lines, the Vessel Master shall board the vessel.</p> <p>He will step off onto the pontoon at the west riverbank.</p>	1	3	3
3	Assembling the JUB pontoons in shallow water	Personal injuries, working over water	C	2	2	4	<p>When the pontoons are dropped into the water, OCM/CGL crew at the quay will secure the mooring lines.</p> <p>OCM crew from the Crew Boat will board the pontoon, install the connecting pins to the adjacent pontoon (where applicable) and disconnect the lifting accessories.</p> <p>At this stage no edge protection will be installed on the pontoons.</p> <p>In the anticipated shallow water depths during this part of the operation, the crew members lifejacket would be deemed sufficient mitigation against fall into the water.</p> <p>If water depths are significant, an inertia reel and harness will be used; fixed to point in center of pontoon.</p>	1	2	2

Causeway Geotech Ltd		RISK ASSESSMENT		Prepared by: NH			Checked by: CD			
		RA99: General project specific risks - Barge	Routine Risks	Date:			November 2019			
								CGT_RA99 Rev 02		
REF	ACTIVITY	POTENTIAL HAZARD	PERSONS AT RISK	Risk Rating Before Existing Controls			Existing Control Measures	Risk Rating After Existing Controls		
				P	C	R		P	C	R
4	Crew Boat/ Work Boat mooring arrangements	Equipment damage	C	2	2	4	The small boat will be secured via adequate mooring ropes. Vessel Master to inspect tidal range on arrival at the quay area and propose appropriate locations for Work Boat. Mooring points to be designed to allow vessel to rise and fall on the tide as required.	1	2	2
5	Drilling Activities	Wet clothing	E, C	2	2	4	All crew to have double PPE to allow 1 set to dry in the drying room throughout the day while the other set is in use and vice versa.	1	2	2
6	Ascend/ descend ladders	Fall from height	C	2	2	4	Only one person to access fixed ladder at any one time. Three points of contact to be maintained at all times. Non-slip safety footwear to be worn Certified harnesses and inertia reel to be used. Ladders visually inspected daily and inspected externally 6-monthly. Use lanyards and toolbelts to secure equipment. Personnel in area wearing hard hats.	1	2	2
7	Emergency Evacuation of casualty from JUB	Non-gangway locations accessed via Safety Boat	E, C	2	2	4	If the casualty is conscious and able to walk, they will be transferred to the Safety Boat and taken to the nearest quay. In a scenario where the casualty is incapacitated, a Neil Robertson stretcher will be used to transfer them from the JUB to the Safety Boat. From there they will be taken to the nearest quay; it is anticipated in this scenario the emergency services will have been contacted and will be on site to assist in the extraction of the casualty.	1	2	2

Causeway Geotech Ltd 		RISK ASSESSMENT		Prepared by: NH	Checked by: CD	CGT_RA99 Rev 02						
RA99: General project specific risks - Barge		Routine Risks	Date:	November 2019								
REF	ACTIVITY	POTENTIAL HAZARD	PERSONS AT RISK	Risk Rating Before Existing Controls			Existing Control Measures			Risk Rating After Existing Controls		
				P	C	R				P	C	R
Key												
Probability (P)			Consequence (C)			Risk Rating (R)			Persons at risk			
3 = Frequent			3 = Severe			6.1-9 = High			E: Employees			
2 = Occasional			2 = Moderate			3.1-6 = Moderate			C: Contractors			
1 = Rare			1 = Minor			1-3 = Rare			V: Visitors			
									P: Public			